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Monthly Wholesale Trade

Sales and Inventories

October 1998

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MONTHLY WHOLESALE TRADE: SALES AND INVENTORIES OCTOBER 1998

Sales. October 1998 sales of merchant wholesalers, after adjustment for seasonal variations and trading-day differences but not for price changes, were \$213.0 billion, down 0.4 percent (+/-0.9%) from the revised September level but were 1.4 percent (+/-1.5%) above the October 1997 level. The September preliminary estimate was revised downward \$0.2 billion or 0.1 percent. October sales of durable goods decreased 0.9 percent (+/-0.9%) from September but were 0.7 percent (+/-2.3%) above last October. Compared to last month, sales of machinery, equipment and supplies were down 4.9 percent, while electrical goods increased 2.8 percent. Among nondurable goods, sales of apparel, piece goods, and notions increased 4.4 percent from last month, while sales of beer, wine, and distilled alcoholic beverages fell 4.3 percent.

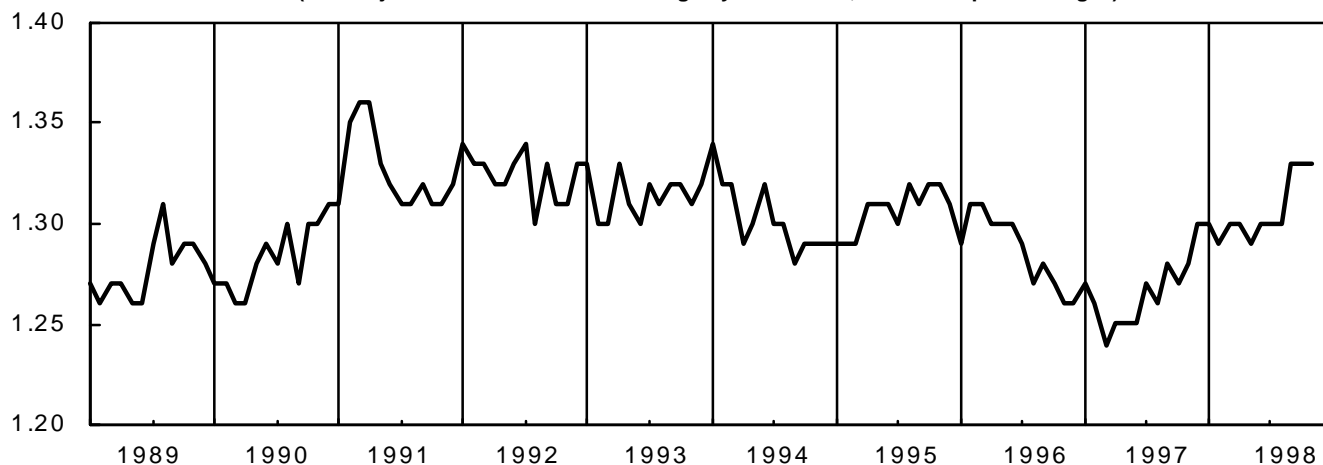
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$283.4 billion at the end of October, down 0.2 percent (+/-0.4%) from the revised September level but

were 5.5 percent (+/-1.9%) above October 1997. The September preliminary estimate was revised upward \$0.2 billion or 0.1 percent. Among durable goods, inventories of furniture and home furnishings increased 2.7 percent from last month. End-of-month inventories of nondurable goods decreased 1.1 percent (+/-0.9%) from last month but were 4.4 percent (+/-2.6 %) above October 1997. Compared to last month, inventories of petroleum and petroleum products decreased 4.1 percent and paper and paper products declined 2.3 percent.

Inventories/Sales Ratio. The October inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.33. The October 1997 ratio was 1.28.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling variability. A discussion of the reliability of the data and general survey methodology appears in BW/97-RV Current Business Reports.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1989 to 1998
(Data adjusted for seasonal and trading-day differences, but not for price changes)



Monthly Wholesale Trade for March is scheduled to be released January 8, 1999 at 10:00 a.m.

Address inquiries concerning this report to Service Sector Statistics Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienckoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

This report is available on day of issue through the Department of Commerce's online Economic Bulletin Board (202-482-1986). The data are also available on the internet - <http://www.census.gov/svsd/www/mwts.html>.

Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: 1998 and 1997

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Oct. 1998 (p)	Sep. 1998 (r)	Oct. 1997 (r)	Oct./ Sep.	Sep./ Aug.	Oct. 98 Oct. 97	Oct. 1998 (p)	Sep. 1998 (r)	Oct. 1997 (r)	Oct./ Sep.	Sep./ Aug.	Oct. 98 Oct. 97	Oct. 1998 (p)	Sep. 1998 (r)	Oct. 1997 (r)
Adjusted²																
	U.S. Total	213,014	213,856	210,137	-0.4	1.0	1.4	283,432	284,128	268,745	-0.2	1.3	5.5	1.33	1.33	1.28
50	Durable	111,784	112,821	110,955	-0.9	-0.5	0.7	185,698	185,305	175,121	0.2	0.8	6.0	1.66	1.64	1.58
501	Automotive	19,017	19,548	18,739	-2.7	0.4	1.5	28,405	28,253	29,035	0.5	1.2	-2.2	1.49	1.45	1.55
502	Furniture	3,335	3,368	3,477	-1.0	-3.9	-4.1	5,819	5,667	5,439	2.7	0.3	7.0	1.74	1.68	1.56
503	Lumber	7,762	7,646	7,384	1.5	-0.3	5.1	7,696	7,633	7,972	0.8	-4.3	-3.5	0.99	1.00	1.08
504	Prof. equip.	21,257	21,507	20,292	-1.2	-0.9	4.8	25,106	25,470	25,859	-1.4	-0.4	-2.9	1.18	1.18	1.27
505	Metals	8,449	8,631	9,262	-2.1	0.2	-8.8	14,735	14,707	13,811	0.2	1.0	6.7	1.74	1.70	1.49
506	Electrical	17,445	16,963	16,560	2.8	0.0	5.3	27,415	27,375	25,732	0.1	1.5	6.5	1.57	1.61	1.55
507	Hardware	6,399	6,346	6,415	0.8	-4.3	-0.2	13,475	13,448	12,330	0.2	-0.8	9.3	2.11	2.12	1.92
508	Machinery	17,739	18,647	17,802	-4.9	1.3	-0.4	46,360	46,125	40,175	0.5	1.9	15.4	2.61	2.47	2.26
509	Other Durable	10,381	10,165	11,024	2.1	-2.4	-5.8	16,687	16,627	14,768	0.4	2.4	13.0	1.61	1.64	1.34
51	Nondurable	101,230	101,035	99,182	0.2	2.8	2.1	97,734	98,823	93,624	-1.1	2.0	4.4	0.97	0.98	0.94
511	Paper	7,881	7,849	7,305	0.4	2.7	7.9	9,066	9,277	8,879	-2.3	-0.9	2.1	1.15	1.18	1.22
512	Drugs	11,366	11,229	9,717	1.2	1.7	17.0	15,175	14,846	12,862	2.2	0.0	18.0	1.34	1.32	1.32
513	Apparel	6,889	6,599	6,789	4.4	-3.2	1.5	12,301	12,193	12,296	0.9	-0.7	0.0	1.79	1.85	1.81
514	Groceries	29,088	28,949	26,797	0.5	0.3	8.5	16,031	16,215	15,669	-1.1	-1.4	2.3	0.55	0.56	0.58
515	Farm-products	9,012	8,841	11,728	1.9	6.1	-23.2	12,666	13,153	12,565	-3.7	16.7	0.8	1.41	1.49	1.07
516	Chemicals	4,653	4,553	4,727	2.2	0.3	-1.6	5,068	5,113	4,934	-0.9	2.5	2.7	1.09	1.12	1.04
517	Petroleum	12,349	12,348	13,160	0.0	6.4	-6.2	4,412	4,599	4,848	-4.1	5.4	-9.0	0.36	0.37	0.37
518	Alcohol	4,954	5,175	4,627	-4.3	10.3	7.1	5,497	5,465	4,699	0.6	-0.1	17.0	1.11	1.06	1.02
519	Other Nondur.	15,038	15,492	14,332	-2.9	4.8	4.9	17,518	17,962	16,872	-2.5	0.8	3.8	1.16	1.16	1.18
Not Adjusted														Sales to date		
														1999	1998	
	U.S. Total	224,403	219,074	226,108	2.4	4.2	-0.8	285,756	278,248	270,890	2.7	0.8	5.5	2,131,955	2,088,907	
50	Durable	119,200	117,912	120,562	1.1	4.7	-1.1	185,370	184,243	174,786	0.6	-0.2	6.1	1,133,490	1,096,059	
501	Automotive	19,702	19,177	19,601	2.7	3.2	0.5	28,405	27,857	29,035	2.0	2.0	-2.2	188,848	181,644	
502	Furniture	3,632	3,577	3,880	1.5	2.4	-6.4	5,842	5,854	5,455	-0.2	-0.1	7.1	34,160	34,115	
503	Lumber	8,445	8,212	8,277	2.8	-1.7	2.0	7,396	7,587	7,661	-2.5	-5.3	-3.5	77,066	76,953	
504	Prof. equip.	22,129	23,077	21,611	-4.1	8.2	2.4	25,307	25,088	26,092	0.9	-2.1	-3.0	212,492	195,548	
505	Metals	8,745	8,873	9,827	-1.4	3.3	-11.0	14,396	14,501	13,507	-0.7	-0.5	6.6	88,653	90,756	
506	Electrical	19,085	18,557	18,547	2.8	7.6	2.9	26,949	27,512	25,295	-2.0	-0.7	6.5	171,900	168,405	
507	Hardware	7,077	6,841	7,211	3.4	2.2	-1.9	13,327	13,394	12,207	-0.5	-1.4	9.2	66,615	63,867	
508	Machinery	18,395	18,498	18,710	-0.6	3.9	-1.7	46,360	45,341	40,175	2.2	0.1	15.4	185,781	172,663	
509	Other Durable	11,990	11,100	12,898	8.0	4.9	-7.0	17,388	17,109	15,359	1.6	2.6	13.2	107,975	112,108	
51	Nondurable	105,203	101,162	105,546	4.0	3.8	-0.3	100,386	94,005	96,104	6.8	2.8	4.5	998,465	992,848	
511	Paper	8,204	8,289	7,831	-1.0	6.3	4.8	9,129	9,110	8,932	0.2	0.2	2.2	76,020	70,715	
512	Drugs	11,877	11,543	10,553	2.9	10.2	12.5	15,403	14,712	13,068	4.7	1.8	17.9	108,979	93,524	
513	Apparel	7,840	7,391	7,896	6.1	0.6	-0.7	12,104	12,291	12,099	-1.5	-1.8	0.0	71,325	70,827	
514	Groceries	30,048	28,602	28,056	5.1	-1.5	7.1	16,913	16,329	16,546	3.6	1.4	2.2	285,087	272,956	
515	Farm-products	9,697	8,602	12,983	12.7	11.9	-25.3	14,414	9,444	14,173	52.6	18.2	1.7	88,411	103,106	
516	Chemicals	4,760	4,521	4,944	5.3	-1.0	-3.7	4,962	5,011	4,825	-1.0	0.2	2.8	46,472	47,009	
517	Petroleum	12,682	12,027	13,897	5.4	4.0	-8.7	4,553	4,636	4,993	-1.8	5.8	-8.8	121,891	139,790	
518	Alcohol	5,207	5,175	5,025	0.6	7.9	3.6	6,003	5,749	5,136	4.4	5.1	16.9	47,066	44,807	
519	Other Nondur.	14,888	15,012	14,361	-0.8	5.4	3.7	16,905	16,723	16,332	1.1	1.7	3.5	153,214	150,114	

p Preliminary estimate. r Revised.

1 For a full description of the SIC Codes shown above see the "1987 Standard Industrial Classification Manual" or the Current Business Reports "Annual Benchmark Report for Wholesale Trade" publication.

2 Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for seasonal adjustment factors used

Table 2. Coefficients of Variation and Standard Error for Sales and Inventories

SIC code	Kind of business	Coefficients of variation for level (x 100)				Standard error for trend				Coefficients of variation for level (x 100)		Standard error for trend
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to year estimates		Cumulative sales estimates		Current year cumulative
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	Current year	Previous year	to previous year
		Median	Median	Median	Median	Median	Median	Median	Median			
	U.S. Total	1.0	1.3	1.0	1.3	0.4	0.2	0.7	1.0	0.9	0.7	0.3
50	Durable	2.1	2.2	2.0	2.2	0.6	0.3	1.0	1.1	1.9	2.3	0.8
501	Automotive	4.2	5.3	4.1	5.3	1.1	0.8	2.0	2.0	4.1	4.0	1.4
502	Furniture	6.5	7.7	6.6	7.6	1.9	0.8	3.6	2.3	6.3	5.9	2.3
503	Lumber	4.8	5.8	4.9	5.8	1.2	0.8	2.3	2.4	4.9	5.2	1.7
504	Prof. equip.	5.2	6.3	4.9	6.1	1.3	0.7	3.0	3.1	4.5	5.2	2.7
505	Metals	4.6	9.2	4.6	9.2	1.2	0.7	1.6	3.0	4.5	4.4	1.0
506	E lectrical	5.9	5.9	5.9	5.6	1.4	0.5	2.2	1.9	5.9	5.3	1.3
507	Hardware	5.2	5.7	5.3	5.4	1.1	0.5	1.6	1.8	5.3	4.8	0.9
508	Machinery	6.3	5.9	6.2	5.9	1.7	0.6	3.0	2.1	6.2	5.9	1.9
509	Other Durable	5.7	7.8	5.8	7.8	1.7	0.9	2.5	2.8	5.8	4.9	1.4
51	Nondurable	1.9	2.2	1.9	2.2	0.5	0.4	1.0	1.2	1.7	1.0	0.5
511	Paper	5.0	5.0	5.0	4.9	1.1	0.6	4.2	4.8	4.8	0.5	0.4
512	Drugs	6.2	4.9	6.1	4.9	0.8	0.4	2.2	1.4	6.2	5.7	2.0
513	Apparel	5.3	7.7	5.1	7.6	2.0	0.9	2.8	2.7	4.7	4.7	2.2
514	Groceries	3.0	5.4	3.0	5.5	0.8	0.6	1.3	1.4	3.0	3.0	1.0
515	Farm-products	5.8	8.4	5.8	8.4	2.1	1.9	2.9	4.0	4.9	5.1	2.1
516	Chemicals	5.9	5.8	5.9	5.8	1.4	0.6	2.0	2.0	5.7	5.8	1.2
517	Petroleum	6.0	16.0	5.9	15.6	0.9	0.9	1.8	1.6	5.7	5.8	1.3
518	Alcohol	6.4	8.5	6.3	8.6	1.5	1.3	1.7	16.4	6.4	6.6	0.7
519	Other Nondur.	6.2	6.3	6.3	6.3	2.0	1.0	3.9	4.0	5.7	5.2	2.7

Note: The median measures of variability are based on the most recent 12 months of data.

Sample Design and Reliability of Data

There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling.

Sampling errors occur because observations are made on a sample, not on the entire population, and different samples could have led to different estimates. Standard errors and coefficients of variation, as calculated for this report, are measures of sampling variation. The margin of sampling error, as used on page 1, gives a range about the estimate which is a 90% confidence interval. If, for example, the trend estimate is up 1.2% and the standard error is 0.9%, then the margin of sampling error is $\pm 1.65 \times 0.9\%$ or $\pm 1.5\%$, and the 90% confidence interval is -0.3% to +2.7%. If the interval contains 0, it cannot be stated with certainty whether there was an increase or decrease. For monthly level, the coefficient of variation (CV) is given. The resulting confidence interval is the estimated value $\pm 1.65 \times CV \times$ (the estimated value).

Nonsampling errors are usually attributed to many possible sources: (1) coverage error - failure to accurately represent all population units in the sample,

(2) inability to obtain information about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of collection or processing, or in imputing for missing or inconsistent data. Coverage error has an effect on the accuracy of estimates for this survey to the extent that the administrative records system, which forms the basis of our survey universe frame, does not contain all legal businesses. A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For all kinds of businesses combined, imputed data amount to about 26 percent of the total monthly wholesale sales estimates and 28 percent of the total monthly wholesale inventories estimates.

Nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

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Table 3. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of Business	Sales						Inventories					
		1998					1997	1998					1997
		Nov.	Oct.r	Sep.r	Aug.	Jul.	Oct.r	Nov.	Oct.r	Sep.r	Aug.	Jul.	Oct.r
	U.S. Total¹	0.970	1.060	1.026	0.994	1.011	1.081	1.009	1.005	0.979	0.980	0.994	1.006
50	Durable	0.969	1.071	1.050	0.998	1.014	1.092	0.992	0.995	0.996	1.003	1.013	0.996
501	Automotive	0.960	1.036	0.981	0.954	1.017	1.046	1.011	1.000	0.986	0.978	0.997	1.000
502	Furniture	1.035	1.089	1.062	0.996	0.981	1.116	0.992	1.004	1.033	1.037	1.021	1.003
503	Lumber	0.940	1.088	1.074	1.089	1.098	1.121	0.969	0.961	0.994	1.004	1.007	0.961
504	Prof. equip.	0.948	1.041	1.073	0.983	0.999	1.065	1.007	1.008	0.985	1.002	1.014	1.009
505	Metals	0.936	1.035	1.028	0.997	0.982	1.061	0.969	0.977	0.986	1.001	1.011	0.978
506	Electrical	0.990	1.094	1.094	1.016	1.016	1.120	0.986	0.983	1.005	1.027	1.027	0.983
507	Hardware	0.976	1.106	1.078	1.009	1.084	1.124	0.983	0.989	0.996	1.002	0.999	0.990
508	Machinery	0.939	1.037	0.992	0.967	0.990	1.051	0.989	1.000	0.983	1.000	1.012	1.000
509	Other Durable	1.076	1.155	1.092	1.016	0.956	1.170	0.990	1.042	1.029	1.027	1.026	1.040
51	Nondurable	0.969	1.045	0.999	0.990	1.011	1.066	1.037	1.025	0.954	0.939	0.961	1.025
511	Paper	0.951	1.041	1.056	1.021	1.001	1.072	1.022	1.007	0.982	0.971	1.000	1.006
512	Drugs	0.989	1.045	1.028	0.948	1.002	1.086	1.005	1.015	0.991	0.973	0.989	1.016
513	Apparel	0.936	1.138	1.120	1.078	1.077	1.163	0.967	0.984	1.008	1.020	1.032	0.984
514	Groceries	0.981	1.033	0.988	1.006	1.034	1.047	1.033	1.055	1.007	0.980	0.995	1.056
515	Farm-products	1.035	1.076	0.973	0.922	0.919	1.107	1.230	1.138	0.718	0.709	0.766	1.128
516	Chemicals	0.950	1.023	0.993	1.006	1.016	1.046	0.989	0.979	0.980	1.003	0.998	0.978
517	Petroleum	0.988	1.027	0.974	0.996	0.987	1.056	1.029	1.032	1.008	1.004	0.966	1.030
518	Alcohol	1.022	1.051	1.000	1.022	1.078	1.086	1.069	1.092	1.052	1.000	1.020	1.093
519	Other Nondur.	0.896	0.990	0.969	0.964	1.006	1.002	0.995	0.965	0.931	0.922	0.948	0.968



r Revised

1 Adjusted sales and inventories data shown in table 1 are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding group. Adjusted data for the totals are obtained by adding the durable and nondurable goods. Seasonal factors shown for the totals will provide an approximation of the adjusted estimates, but may show small differences from the published data.

Note: The seasonal factors shown have been computed based on monthly estimates through the current month preliminary estimates.